

REMARKS

This Amendment is submitted in response to the Office Action dated January 12, 2006, having a shortened statutory period set to expire April 12, 2006. Claims 1-18 are currently pending.

Amendments to the Specification

The specification has been amended to correct minor errors discovered by Applicants. No new matter has been added.

Amendments to the Drawings

The drawings have been amended to remove element numbers 415, 416, 417, 902, 903, 1010a, 1010b, and 1020. FIG. 1 has been amended to include the label "Prior Art."

Claim Rejections Under 35 U.S.C. 102

Claims 1 and 3-18 have been rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pat. No. 6,560,721, issued to Boardman et al. (hereinafter *Boardman*). Applicants thank the Examiner for spending substantial time and effort in discussing the issues raised by the foregoing rejections with Applicants' undersigned representative. Pursuant to feedback from the Examiner and Applicants' review of the merits of the rejections, independent claims 1, 7, and 13 have been amended to more clearly characterize and distinguish Applicants' proposed invention from the subject matter disclosed by *Boardman*.

Applicants' proposed invention is depicted and described in on page 123, line 19 *et seq.*, referring to **FIGS. 22A-22C** and **FIGS. 23A-23C**. In general, the invention provides a means in a simulation batch processing environment for collecting and storing simulation testcases that trigger harvest events (a general characterization of a "harvest event" is provided, for example, on page 29, lines 17-24 of the specification). More specifically, and in one aspect described with reference to **FIGS. 22A-22C**, the invention provides a way of collecting harvest event triggering testcases in a way that reduces unwanted testcase collection redundancy while enabling an instrumentation server serving multiple clients in the simulation batch farm to process receipt of testcase data in a non-serialized, batch processing manner (see page 123, lines

19-24; page 130, lines 14-24). In another aspect (described with reference to **FIGS. 23A-23C**), the invention provides for the testcases collection results to be “annealed,” or for testcase collection inconsistencies to be resolved. Two particular sources of such inconsistencies arise due to the described (and claimed) structure and sequence of the aforementioned harvest testcase collection system as it relates to a “master harvest hit table” and a “testcase bucket.” In accordance with the invention, the “master harvest hit table” (see master harvest hit table **2205** in **FIGS. 22A** and **23A**) includes harvest event entries that associate harvest events triggered during simulation testing with the corresponding triggering testcases. The “testcase bucket” (see harvest testcase bucket **2300** in **FIGS. 22A** and **23A**) is characterized as containing testcases that have triggered harvest events during simulation testing of a simulation model by multiple simulation clients.

As explained on page 137, line 28 through page 138, line 9, one source of testcase collection inconsistency is the “lost harvest testcase” which occurs when a harvest event is recorded in the master harvest hit table in association with the triggering testcase but the attempt to record the testcase in the testcase bucket fails. As explained on page 138, lines 11-23, the other source of testcase collection inconsistency is the extraneous or redundantly recorded harvest testcase which occurs when testcases that are redundant with respect to a given harvest event (i.e. different testcases that trigger the same harvest event) may be collected within the testcase bucket in spite of the design and intent of the non-redundant collection method described in **FIGS. 22A-22C**. The features of the invention described with reference to **FIGS. 23A-23C** address both of these sources of testcase collection inconsistency.

FIGS. 22A-22C and the corresponding description at page 125, line 1 through page 137, line 24 describe the system/method that store harvest event triggering testcases on a per simulation model basis and in a manner that enables non-serialized, batch processing (see page 123, lines 19-24; page 130, lines 14-24) which is much more efficient in a simulation farm environment in which multiple simulation clients may be executing many testcase simulation runs on a simulation model. Another advantage of the testcase collection technique described with reference to **FIGS. 22A-22C** is that it minimizes the number of effectively redundant testcases (i.e. different testcases that trigger the same harvest event) collected (see page 124, lines 17-23; page 126, lines 1-9; page 127, lines 13-15).

The features of the testcase collection method depicted and described with reference to **FIGS. 22A-22C** have been expressly incorporated in amended claim 1. Namely, the preamble of claim 1 now expressly characterizes that the method is implemented “[i]n a batch simulation farm that facilitates computer-aided simulation testing of hardware design, wherein multiple simulation clients communicate simulation testcase results to an instrumentation server that maintains a master harvest hit table..” The “master harvest hit table” is expressly characterized as “having harvest event entries that associate harvest events triggered during simulation testing with corresponding triggering testcases.” (see specification page 128, lines 15-19; page 125, lines 19-22). The “testcase bucket” is expressly characterized as containing testcases that have triggered harvest events during simulation testing of the simulation model by multiple simulation clients (see page 123, lines 25-26; page 126, lines 25-27, describing testcase bucket **2300**; page 129, lines 13-18). The testcase collection aspect of the claimed method for resolving testcase collection inconsistencies now includes steps of:

- “within one of said multiple simulation clients:” (see simulation client **1701**, **FIG. 22A**)
 - “retrieving a local copy of said master harvest hit table;” (page 125, lines 13-22)
 - “executing a current testcase on the simulation model;” (page 126, lines 15-16)
 - “identifying harvest events triggered during execution of said current testcase; and” (page 126, lines 17-19)
 - “comparing said identified harvest events with harvest events recorded within the local copy of said master harvest hit table to determine whether the identified harvest events have been previously recorded in association with the simulation model.” (page 126, lines 20-23)

The testcase collection feature further includes steps that may be performed in part or in whole by the simulation client or other entities such as an instrumentation server. These steps include:

- “responsive to said step of comparing said identified harvest events with the harvest events recorded within the local copy of said master harvest hit table resulting in a determination that previous occurrences of one or more of said identified harvest events have not been recorded:” (page 126, lines 20-23)

- “recording said current testcase within said testcase bucket; and” (page 128, lines 21-24)

- “comparing said one or more of said identified harvest events determined not to have been recorded with harvest events recorded within said master harvest hit table;” (page 131, lines 10-14)

- updating said master harvest hit table with said one or more of said identified harvest events that do not match harvest events recorded in said master harvest hit table;” (page 131, lines 10-14)

FIGS. 23A-23C, to which the present invention as expressed in the previous claimsets was most closely drawn, describe a method/system that addresses issues related to

consistency in collecting and storing harvest event testcases which arise as a result of the aforementioned testcase collection steps. To this end, amended claim 1 includes steps of:

“comparing testcases recorded within said testcase bucket to testcases identified within said master harvest hit table;”

“responsive to identifying one or more testcases recorded within said master harvest hit table but not within said testcase bucket, removing harvest event entries containing the identified one or more testcases from said master harvest hit table; and”

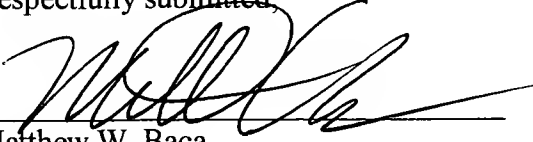
“responsive to determining that one or more testcases are recorded within said testcase bucket but not within said master harvest hit table, removing the one or more testcases recorded within said testcase bucket but not within said master harvest hit table from said testcase bucket.”

Ample support for these amendments is provided at page 137, line 26 *et seq.*, which describes the two targeted sources of testcase collection inconsistency (see page 137, line 26 through page 138, line 23) between a harvest hit table (e.g. harvest hit table **2205**) and testcases recorded in a harvest testcase repository (e.g. harvest testcase bucket **2300**) that may arise due to a recording failure on the repository side or recording redundancy on the harvest hit table side. Support for the step of “comparing testcases recorded within said testcase bucket to testcases identified within said master harvest hit table” is provided at page 139, lines 8-14 (referring to **FIG. 23A**). Support for “responsive to determining that one or more testcases are recorded within said testcase bucket but not within said master harvest hit table, removing the one or more testcases recorded within said testcase bucket but not within said master harvest hit table from said testcase bucket” is provided on page 139, lines 22-28 (referring to **FIG. 23A**). Support for “responsive to identifying one or more testcases recorded within said master harvest hit table but not within said testcase bucket, removing harvest event entries containing the identified one or more testcases from said master harvest hit table” is provided at page 139, lines 14-20 (referring to **FIG. 23A**) and step **2374** of **FIG. 23C**.

Applicants contend that *Boardman* does not disclose a method/system for resolving harvest testcase inconsistencies that is similar to that now expressly recited in independent claims 1, 7, 13, and all claims depending therefrom. Applicants therefore submit that the grounds for rejection have been overcome.

Applicants truly appreciate this Examiner's exemplary efforts in resolving pending issues related to prosecution of the present application and invite the Examiner to contact Applicants' undersigned representative at (512) 343-6116 if such would further expedite the prosecution of the present Application.

Respectfully submitted



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